

IN THE CLAIMS

- Claim 1 (**currently amended**). Ceramic nanofiltration membrane for use in organic solvents, ~~characterized by the fact that~~ **comprising** a mesoporous ceramic membrane ~~ordinarily used for ultrafiltration is~~ modified by treatment with a hydrophobing agent.
- Claim 2 (**currently amended**). Ceramic **nanofiltration** membrane according to Claim 1, ~~characterized by the fact that the pore size of~~ **wherein** the mesoporous membrane is **has a pore size** between 2 nm and 10 nm, ~~preferably between 2 nm and 5 nm.~~
- Claim 3 (**currently amended**). Ceramic **nanofiltration** membrane according to ~~one of the preceding claims, characterized by the fact that~~ **claim 1, wherein** the mesoporous ceramic membrane consists of a metal oxide, ~~preferably TiO₂, ZrO₂, Al₂O₃ or SiO₂ or mixtures of two or more of these oxides.~~
- Claim 4 (**currently amended**). Ceramic **nanofiltration** membrane according to ~~one of the preceding claims, characterized by the fact that~~ **claim 1, wherein** the hydrophobing agent used for modification is a silane of the ~~general~~ formula R₁R₂R₃R₄Si.
- Claim 5 (**currently amended**). Ceramic **nanofiltration** membrane according to Claim 4, ~~characterized by the fact that~~ **wherein** between one and three, ~~but preferably one~~ of the groups R₁-R₄ are hydrolyzable groups, ~~like Cl, OCH₃ or O-CH₂-CH₃.~~
- Claim 6 (**currently amended**). Ceramic **nanofiltration** membrane according to Claim 4, ~~characterized by the fact that~~ **wherein** between one and three ~~but preferably three~~ of the groups R₁-R₄ are nonhydrolyzable groups, ~~like alkyl groups, phenyl groups.~~
- Claim 7 (**currently amended**). Ceramic **nanofiltration** membrane according to Claim 6, ~~characterized by the fact that, to increase the hydrophobic effect,~~ **wherein** at least one of the nonhydrolyzable substituents is at last partially fluorinated.

- Claim 8 (currently amended). Method for production of a the ceramic nanofiltration membrane ~~according to one of the preceding claims, characterized by the fact that modification of the~~ of claim 1, which comprises modifying a mesoporous membrane ~~occurs by impregnating it~~ impregnation with ~~the a~~ hydrophobing agent in the liquid phase.
- Claim 9 (currently amended). Method according to Claim 8, ~~characterized by the fact that~~ wherein penetration of a the hydrophobing agent is supported by a pressure difference between the front and back side of the membrane.
- Claim 10 (currently amended). Method for production of a the ceramic nanofiltration membrane of claim 1, which comprises modifying a mesoporous membrane by impregnating it with a ~~according to one of the Claims 1 to 7, characterized by the fact that modification of the mesoporous membrane occurs with the~~ hydrophobing agent ~~from in~~ in the gas phase.
- Claim 11 (currently amended). Method according to ~~one of the Claims 1 to 9, characterized by the fact that~~ claim 8 wherein, after treatment with the hydrophobing agent, heat treatment between 100 and 400°C, ~~preferably between 150 and 300°C~~ is applied.
- Claim 12 (new). The ceramic nanofiltration membrane of claim 2, wherein said pore size is 2 nm and 5 nm.
- Claim 13 (new). The ceramic nanofiltration membrane of claim 3, wherein said metal oxide is selected from the group consisting of TiO₂, ZrO₂, Al₂O₃, SiO₂ and mixtures of two or more thereof.
- Claim 14 (new). The ceramic nanofiltration membrane of claim 5, wherein one of the groups R₁-R₄ is a hydrolyzable group.
- Claim 15 (new). The ceramic nanofiltration membrane of claim 5, wherein said hydrolyzable groups are selected from the group consisting of Cl, -OCH₃ or -O-CH₂-CH₃.
- Claim 16 (new). The ceramic nanofiltration membrane of claim 14, wherein said hydrolyzable group is or selected from the group consisting of Cl, -OCH₃ or -O-CH₂-CH₃.

Claim 17 (new). The ceramic nanofiltration membrane of claim 6, wherein three of the groups R_1 - R_4 are nonhydrolyzable groups.

Claim 18 (new). The ceramic nanofiltration membrane of claim 6, wherein said nonhydrolyzable groups are selected from the group consisting of alkyl groups and phenyl groups.

Claim 19 (new). The ceramic nanofiltration membrane of claim 17, wherein said nonhydrolyzable groups are selected from the group consisting of alkyl groups and phenyl groups.

Claim 20 (new). Method according to claim 10, wherein after treatment with the hydrophobing agent, heat treatment between 100 and 400°C is applied.

Claim 21 (new). Method according to claim 20, wherein said heat treatment is between 150 and 300°C.

Claim 22 (new). Method according to claim 11, wherein said heat treatment is between 150 and 300°C.